



PATENT  
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Tracey Simmons  
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Tracey Simmons  
Signature of person mailing correspondence

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Robert A. Murgita	Art Unit:	1647
Serial No.:	08/879,469	Examiner:	Stephen Gucker
Filed:	June 20, 1997	Customer No.:	21559
Title:	RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL PROLIFERATIVE AGENT		

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF FORMAL DRAWINGS TO OFFICIAL DRAFTSPERSON

In reply to the Notice of Allowability that was mailed in connection with the above-captioned case on March 21, 2003, and with reference to the Notice of Allowance that was mailed on March 21, 2003, having confirmation number 9547, enclosed are:

Five sheets of formal drawings that replace the informal drawings filed with the application include the changes required by the Official Draftsperson.

If there are any other charges or any credits, please apply them to Deposit Account No.

03-2095.

Respectfully submitted,



Date: 28 July 2004

For

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RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL  
PROLIFERATIVE AGENT

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AT (2)  
-1  
-10  
-19  
ATGCTCTTCCACCACTGCCAATACAAATATACAGCAACC ATG AAG TCG GTG GAA TCA ATT TTT TTA ATT TTC CTA CTA AAT TTT ACT GAA TCC AGA (101)  
30  
20  
10  
1  
thr leu his arg asn glu tyr gly ile ala ser ile leu asp ser tyr gln cys thr ala glu ile ser leu ala asp leu ala thr ile  
ACA CTG CAT AGA AAT GAA TAT GGA ATA GCT TCC ATA TTG GAT TCT TAC CAA TGT ACT GCA GAG ATA AGT TTA GCT GAC CTG GCT ACC ATA (191)  
60  
50  
40  
31  
phe phe ala glu phe val glu glu ala thr tyr lys glu val ser lys met val lys asp ala leu thr ala ile glu lys pro thr gly  
TTT TTT GCC CAG TTT GTT CAA GAA GCC ACT TAC AAG GAA GTA AGC AAA ATG GTG AAA GAT GCA TTG ACT GCA ATT GAG AAA CCC ACT GGA (281)  
90  
80  
70  
61  
asp glu glu ser ser gly cys leu glu asn glu leu pro ala phe leu glu glu leu cys his glu lys glu ile leu glu lys tyr gly  
GAT GAA GAG TCT TCA GGG TGT TTA GAA AAC CAG CTA CCT GCC TTT CTG GAA GAA CTT TGC CAT GAG AAA GAA AAT TTG GAG AAG TAC GGA (371)  
120  
110  
100  
91  
his ser asp cys cys ser glu ser glu gly arg his asn cys phe leu ala his lys lys pro thr pro ala ser ile pro leu phe  
CAT TCA GAC TGC TGC AGC CAA AGT GAA GAG GGA AGA CAT AAC TGT TTT CTT GCA CAC AAA AAG CCC ACT CCA GCA TCG ATC CCA CTT TTC (461)  
150  
140  
130  
121  
glu val pro glu pro val thr ser cys glu ala tyr glu glu asp arg glu thr phe met asn lys phe ile tyr glu ile ala arg arg  
CAA GTT CCA GAA CCT GTC ACA AGC TGT GAA GCA TAT GAA GAA GAC AGG AGA TTC ATG AAC AAA TTC AAT TAT GAG ATA GCA AGA AGG (551)  
180  
170  
160  
151  
his pro phe leu tyr ala pro thr ile leu leu trip ala ala arg tyr asp lys ile ile pro ser cys cys lys ala glu asn ala val  
CAT CCC TTC CTG TAT GCA CCT ACA ATT CTT TCG GCT GCT CGC TAT GAC AAA ATA AAT CCA TCT TGC TGC AAA GCT GAA AAT GCA CTT (641)  
210  
200  
190  
181  
glu cys phe glu thr lys ala ala thr val thr lys glu leu arg glu ser ser leu leu asn glu his ala cys ala val met lys asn  
GAA TGC TTC CAA ACA AAG GCA ACA GAT ACA AAA GAA TTA AGA GAA AGC AGC TTC TTA AAT CAA CAT GCA TGT GCA GTA ATG AAA AAT (731)

Fig. 1A



RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL  
PROLIFERATIVE AGENT

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211 phe gly thr arg thr phe gln ala ile thr val thr lys leu ser gln lys phe thr lys val asn phe thr gln ile gln lys leu val 240  
TTT GCG ACC CGA ACT TTC CAA GCC ATA ACT GTT ACT AAA CTG AGT CAG AAG TTT ACC AAA GTT AAT TTT ACT GAA ATC CAG AAA CTA GTC (821)  
220  
241 leu asp val ala his val his gln his cys arg gly asp val leu asp cys leu gln asp gly gln lys ile met ser tyr ile cys 270  
CTG GAT GTG GCC CAT CTA CAT GAG CAC TGT TGC AGA GGA GAT GTG CTG GAT TGT CTG CAG GAT GGG GAA AAA ATC ATG TCC TAC ATA TGT (911)  
250  
271 ser gln gln asp thr leu ser asn lys ile thr gln cys cys lys leu thr thr leu gln arg gly gln cys ile ile his ala gln asn 300  
TCT CAA CAA GAC ACT CTG TCA AAC AAA ATA ACA GAA GAA TGC AAA CTG ACC ACG CTG GAA CGT GGT CAA TGT ATA ATT CAT GCA GAA AAT (1001)  
310  
301 asp gln lys pro gln gly leu ser pro asn leu asn arg phe leu gly asp arg asp phe asn gln phe ser ser gly gln lys asn ile 330  
GAT GAA AAA CCF GAA GGT CTA TCT CCA AAT CTA AAC ACG TTT TTA GGA GAT AGA GAT TTT AAC CAA TTT TCT TCA GCG GAA AAA AAT ATC (1091)  
340  
331 phe leu ala ser phe val his gln tyr ser arg arg his pro gln leu ala val ser val ile leu arg val ala lys gly tyr gln gln 360  
TTC TTG GCA AGT TTT CTT CAT GAA TAT TCA AGA AGA CAT CCT CAG CTT GCT GTC TCA GTA ATT CTA AGA GTT GCT AAA GGA TAC CAG GAG (1181)  
370  
361 leu leu gln lys cys phe gln thr gln asn pro leu gln cys gln asp lys gly gln gln leu gln lys tyr ile gln gln ser gln 390  
TTA TTG GAG AAG TGT TTC CAG ACT GAA AAC CCT CTT GAA TGC CAA GAT AAA GGA GAA GAA TTA CAG AAA TAC ATC CAG GAG AGC CAA (1271)  
400  
391 ala leu ala lys arg ser cys gly leu phe gln lys leu gly gln tyr tyr leu gln asn ala phe leu val ala tyr thr lys lys ala 420  
GCA TTG GCA AAG CGA ACG TGC GGC CTC TTC CAG AAA CTA GGA GAA TAT TAC TTA CAA AAT CCG TTT CTC GGT TAC ACA AAG AAA CCC (1361)  
430  
421 pro gln leu thr ser ser gln leu met ala ile thr arg lys met ala ala thr ala ala thr cys cys gln leu ser gln asp lys leu 450  
CCC CAG CTG ACC TCG TCG GAG CTG ATG GCC ATC ACC AGA AAA ATG GCA GCC ACA GCA GCC ACT TGT TGC CAA CTC ACT GAG GAC AAA CTA (1451)

Fig. 1B



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451 460 470 480  
leu ala cys gly glu gly ala ala asp ile ile ile gly his leu cys lle arg his glu met thr pro val asn pro gly val gly gln  
TGC GCC TGT GGC GAG GGA GCG GCT GAC ATT ATT ATC GGA CAC TTA TGT ATC AGA CAT GAA ATG ACT CCA GTA AAC CCT GGT GTT GGC CAG(1541)  
481 490 500 510  
cys cys thr ser ser tyr ala asn arg arg pro cys phe ser ser leu val val asp glu thr tyr val pro pro ala phe ser asp asp  
TGC TGC ACT TCT TCA TAT GCC AAC AGG AGG CCA TGC TGC AGC AGC TTG GTG GTG GAT GAA ACA TAT GTC CCT CCT GCA TTC TCT GAT GAC(1631)  
511 520 530 540  
lys phe ile phe his lys asp leu cys gln ala ala gln gly val ala leu gln thr met lys gln glu phe leu ile asn leu val lys gln  
AAG TTC ATT TTC CAT AAG GAT CTG TGC CAA GCT CAG GGT GTA GCG CTG CAA ACG ATG AAG CAA GAG TTT CTC ATT AAC CTT GTG AAG CAA(1721)  
541 550 560 570  
lys pro gln ile thr glu glu gln leu glu ala val ile ala asp phe ser gly leu leu glu lys cys cys gln gly gln glu gln  
AAG CCA CAA ATA ACA GAG GAA CAA CTT GAG GCT GTC ATT GCA GAT TTC TCA GGC CTG TTG GAG AAA TGC TGC CAA GGC CAG GAA CAG GAA(1811)  
571 580 590  
val cys phe ala glu glu gly gln lys leu ile ser lys thr arg ala ala leu gly val ter  
GTC TGC TTT GCT GAA GAG GGA CAA AAA CTG ATT TCA AAA ACT CGT GCT GCT TTG GGA GTT TAA ATTAATTCAAGGGAAGACAAACGAGTCT(1908)  
TTCAATTCGGTGGAACTTTTCCTTTAATTATTAACGATTTAACACTTTTGTGATTAATGAAATGATTAAGACTTTTAATGTAGATTTCCTTATCACAAGAAATAAATATCTCCAAA(2027)

Fig. 1C



RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL  
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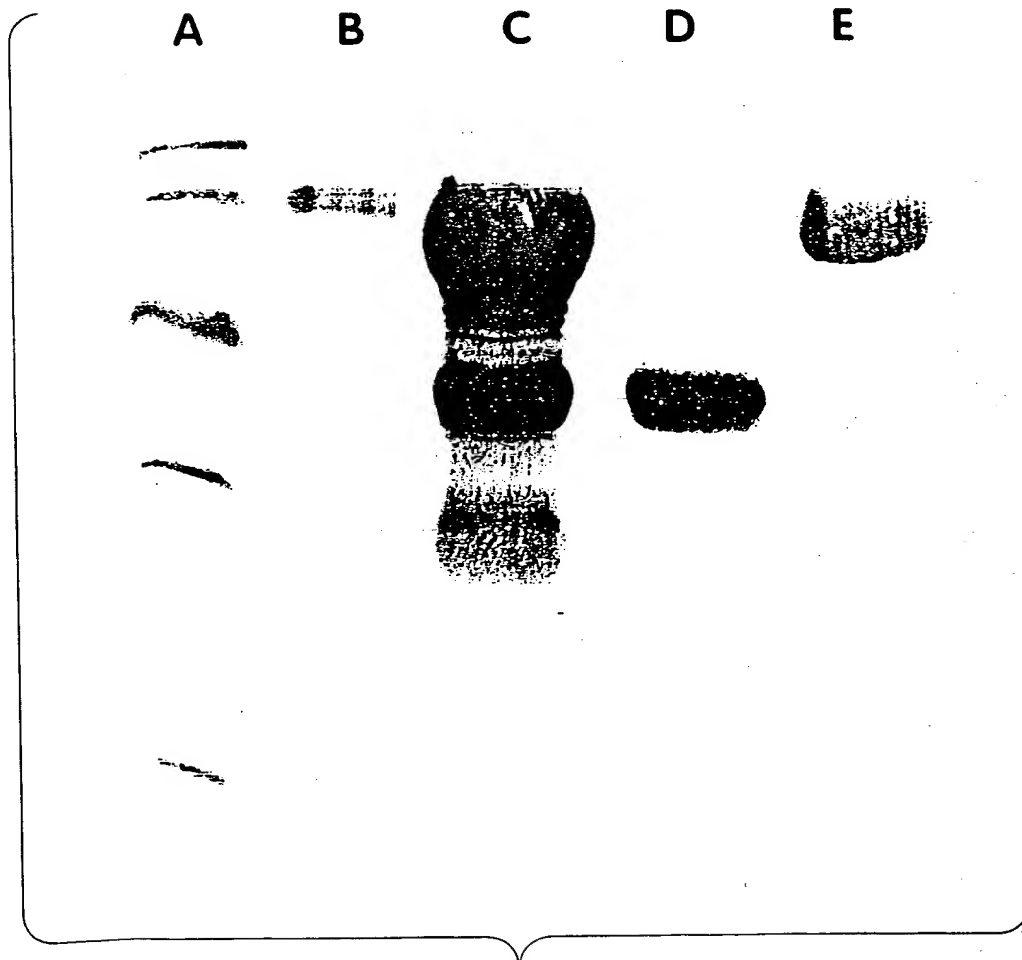


Fig. 2



RECOMBINANT HUMAN ALPHA-FETOPROTEIN AS A CELL  
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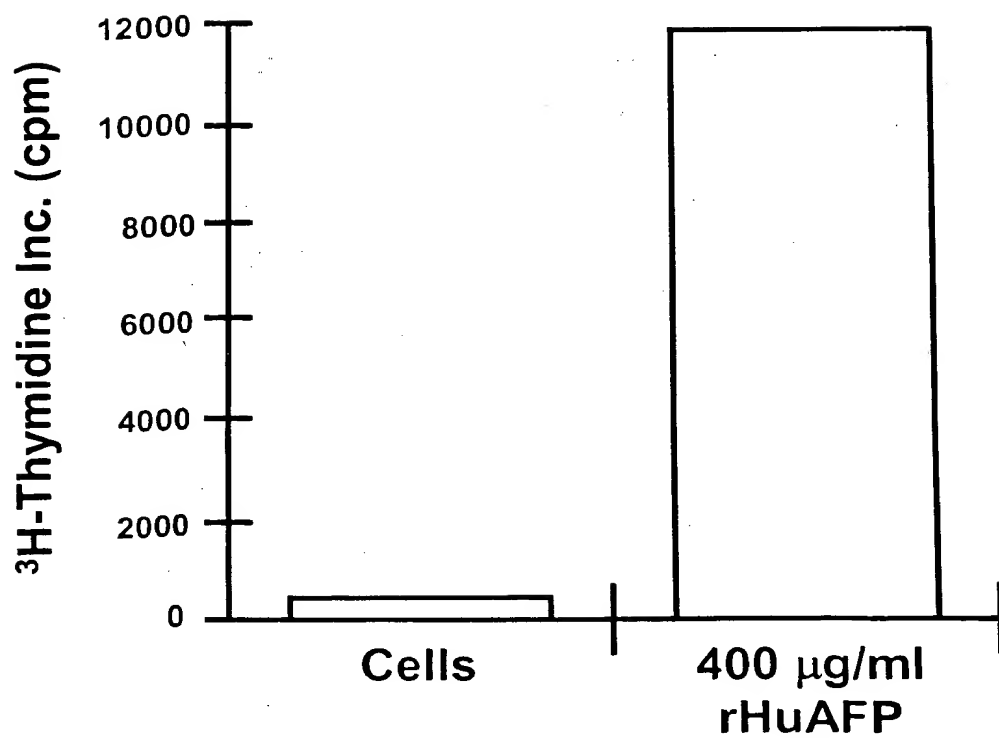


Fig. 3